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**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**Listing of Claims:**

Claim 1 (Currently amended) A method for inactivating microbes in a platelet composition, the method comprising illuminating the platelet composition with pulses of light having a pulse duration of less than 100 ms and having at least one wavelength within a range of 170 to 2600 nm and a fluence per ~~pulse greater than~~ flash in the range of about ~~[[0.001]]~~ 0.1 to about 0.25 J/cm<sup>2</sup>, the illumination effective for inactivating microbes in the platelet composition and for decreasing platelet aggregation by not more than about 40%.

Claim 2 (Currently amended) The method of inactivating microbes of claim 1 wherein the platelet composition is illuminated with pulses of light having wavelengths within a spectral range of at least between about 240 nm and about 280 nm ~~wherein said method does not include the addition of a quenching agent, photoradiation sensitizer, or albumin.~~

Claim 3 (Original) The method of inactivating microbes of claim 1 wherein the platelet composition is selected from the group consisting of platelet rich plasma, leukocyte reduced platelets, non-leukocyte reduced platelets, synthetic platelet substitutes, artificial platelets, recombinant platelet products, and mixtures thereof.

Claim 4 (Cancelled)

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Claim 5 (Currently amended) A method of inactivating microbes in a platelet composition, the method comprising illuminating the platelet solution with pulses of light having a pulse duration of less than 100 ms and having at least one wavelength within a range of 170 to 2600 nm and a fluence per **[[pulse]] flash of about [[0.05 to about 15]] 0.1 to about 0.25 J/cm<sup>2</sup>**, the illumination effective for inactivating microbes in the platelet composition by at least about 2 logs, and for decreasing platelet aggregation by not more than about 40%.

Claim 6 (Currently amended) The method of inactivating microbes of claim 5 wherein the platelet composition is illuminated with pulses of light having wavelengths within a spectral range of at least between about 240 nm and about 280 nm ~~wherein said method does not include the addition of a quenching agent, photoradiation sensitizer, or albumin.~~

Claim 7 (Original) The method of inactivating microbes of claim 5 wherein the platelet composition is selected from the group consisting of platelet rich plasma, leukocyte reduced platelets, non-leukocyte reduced platelets, synthetic platelet substitutes, artificial platelets, recombinant platelet products, and mixtures thereof.

Claim 8 (Currently amended) A method of inactivating microbes in a platelet composition, the method comprising:  
flowing the platelet composition through a treatment chamber, the treatment chamber being light transmissive to at least 1% of a light treatment having at least one wavelength within a range of 170 to 2600 nm and a fluence flash of about 0.1

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to about 0.25 J/cm<sup>2</sup> and the light treatment is provided in pulses of light having a pulse duration of less than 100 ms;

illuminating the platelet composition with the light as the platelet composition is flowed through the flexible treatment chamber;

inactivating microbes within the platelet composition, the method effective for inactivating microbes in the platelet composition by at least 2 logs, and for decreasing platelet aggregation by not more than about 40%.

Claim 9 (Cancelled)

Claim 10 (Previously presented) The method of inactivating microbes of claim 8 wherein the platelet composition is illuminated with pulses of light having wavelengths within a spectral range of at least between about 240 nm and about 280 nm.

Claim 11 (Previously presented) The method of inactivating microbes of claim 8 wherein at least 1% of the fluence of the pulses of light is at wavelengths within a range of 200 to 300 nm.

Claim 12 (Original) The method of inactivating microbes of claim 8 wherein the platelet composition is flowed through the treatment chamber at a constant flow rate.

Claim 13 (Original) The method of inactivating microbes of claim 8 wherein the biological fluid is selected from the group consisting of platelet rich plasma, leukocyte reduced platelets, non-leukocyte reduced platelets, synthetic platelet substitutes,

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artificial platelets, recombinant platelet products, and mixtures thereof.

Claim 14 (Currently amended) A method for increasing shelf-life of a platelet composition, the method comprising:

illuminating the platelet composition with pulses of a light having at least one wavelength within a range of 170 to 2600 nm and a fluence **[[greater than]] in the range of** about **[[0.001]] 0.01 to about 0.25** J/cm<sup>2</sup>, and

repeating the illumination of the platelet composition every 6 hours, the illumination effective for inactivating microbes and for providing a zero net increase of microbial counts in the platelet composition,

wherein platelet aggregation is not decreased by more than about 40%.

Claim 15 (Original) The method of inactivating microbes of claim 14 wherein the platelet composition is illuminated with pulses of light having wavelengths within a spectral range of at least between about 240 nm and about 280 nm and having a pulse duration of less than 100 ms.

Claims 16-18 (Cancelled)

Claim 19 (Currently amended) A method for inactivating microbes in a platelet composition, the method comprising:

illuminating the platelet composition with pulses of a light having a pulse duration of less than 100 ms and having at least one wavelength within a range of 170 to 2600 nm and a fluence per **[[pulse]] flash [[greater than]] in the range of** about **[[0.001]] 0.1 to about 0.25** J/cm<sup>2</sup>, and

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repeating the illumination of the platelet composition every 6 hours, the illumination effective for inactivating microbes and for providing a zero net increase of microbial counts in the platelet composition,

wherein platelet aggregation is not decreased by more than about 40%.

Claim 20 (Currently amended) The method of inactivating microbes of claim 19 wherein the platelet composition is illuminated with pulses of light having wavelengths within a spectral range of at least between about 240 nm and about 280 nm ~~and wherein said method does not include the addition of a quenching agent, photoradiation sensitizer, or albumin.~~

Claim 21 (Cancelled)

Claim 22 (Currently amended) A method for inactivating microbes in a platelet composition, the method comprising illuminating the platelet composition with pulses of light having at least one wavelength within a range of 170 to 2600 nm and a fluence per ~~[[pulse]]~~ flash greater than about 0.001 J/cm<sup>2</sup>, the illumination effective for inactivating microbes in the platelet composition and for decreasing platelet aggregation by not more than about 40%,

wherein said method does not include the addition of genotoxic chemical agents ~~a quenching agent, photoradiation sensitizer, or albumin.~~

Claim 23 (Previously presented) The method of inactivating microbes of claim 22 wherein the platelet composition is illuminated with pulses of light having wavelengths within a

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spectral range of at least between about 240 nm and about 280 nm and having a pulse duration of less than 100 ms.

Claim 24 (Previously presented) The method of inactivating microbes of claim 22 wherein the platelet composition is selected from the group consisting of platelet rich plasma, leukocyte reduced platelets, non-leukocyte reduced platelets, synthetic platelet substitutes, artificial platelets, recombinant platelet products, and mixtures thereof.

Claim 25 (Previously presented) The method of inactivating microbes of claim 22 wherein the platelet composition is illuminated with an amount of light effective for providing a fluence level of about 0.1 to about 0.6 J/cm<sup>2</sup>.

Claim 26 (Currently amended) A method of inactivating microbes in a platelet composition, the method comprising illuminating the platelet solution with pulses of light having at least one wavelength within a range of 170 to 2600 nm and a fluence per ~~[[pulse]]~~ flash of light of about 0.05 to about 15 J/cm<sup>2</sup>, the illumination effective for inactivating microbes in the platelet composition by at least about 2 logs, and for decreasing platelet aggregation by not more than about 40%,

wherein said method does not include the addition of genotoxic chemical agents ~~a quenching agent, photoradiation sensitizer, or albumin.~~

Claim 27 (Previously presented) The method of inactivating microbes of claim 26 wherein the platelet composition is illuminated with pulses of light having wavelengths within a

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spectral range of at least between about 240 nm and about 280 nm and having a pulse duration of less than about 100 ms.

Claim 28 (Previously presented) The method of inactivating microbes of claim 26 wherein the platelet composition is selected from the group consisting of platelet rich plasma, leukocyte reduced platelets, non-leukocyte reduced platelets, synthetic platelet substitutes, artificial platelets, recombinant platelet products, and mixtures thereof.

Claim 29 (Currently amended) A method of inactivating microbes in a platelet composition, the method comprising:

flowing the platelet composition through a treatment chamber, the treatment chamber being light transmissive to at least 1% of a light treatment having at least one wavelength within a range of 170 to 2600 nm;

illuminating the platelet composition with the light as the platelet composition is flowed through the flexible treatment chamber;

inactivating microbes within the platelet composition, the method effective for inactivating microbes in the platelet composition by at least 2 logs, and for decreasing platelet aggregation by not more than about 40%,

wherein said method does not include the addition of genotoxic chemical agents ~~a quenching agent, photoradiation sensitiser, or albumin.~~

Claim 30 (Previously presented) The method of inactivating microbes of claim 29 wherein the illuminating step comprises illuminating the platelet composition with pulses of light.

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Claim 31 (Previously presented) The method of inactivating microbes of claim 29 wherein the platelet composition is illuminated with pulses of light having wavelengths within a spectral range of at least between about 240 nm and about 280 nm and having a pulse duration of less than 100 ms.

Claim 32 (Previously presented) The method of inactivating microbes of claim 29 wherein at least 1% of the fluence of the pulses of light is concentrated at wavelengths within a range of 200 to 300 nm.

Claim 33 (Previously presented) The method of inactivating microbes of claim 29 wherein the platelet composition is flowed through the treatment chamber at a constant flow rate.

Claim 34 (Previously presented) The method of inactivating microbes of claim 29 wherein the platelet composition is selected from the group consisting of platelet rich plasma, leukocyte reduced platelets, non-leukocyte reduced platelets, synthetic platelet substitutes, artificial platelets, recombinant platelet products, and mixtures thereof.

Claim 35 (Currently amended) A method for increasing shelf-life of a platelet composition, the method comprising:

illuminating the platelet composition with pulses of a light having at least one wavelength within a range of 170 to 2600 nm and a fluence per **[[pulse]] flash** greater than about 0.001 J/cm<sup>2</sup>, and

repeating the illumination of the platelet composition every 6 hours, the illumination effective for inactivating



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microbes and for providing a zero net increase of microbial counts in the platelet composition,

wherein platelet aggregation is not decreased by more than about 40%,

wherein said method does not include the addition of genotoxic chemical agents ~~a quenching agent, photeradiation sensitizer, or albumin.~~

Claim 36 (Previously presented) The method of inactivating microbes of claim 35 wherein the platelet composition is illuminated with pulses of light having wavelengths within a spectral range of at least between about 240 nm and about 280 nm and having a pulse duration of less than 100 ms.

Claim 37 (Previously presented) The method of inactivating microbes of claim 35 wherein the platelet composition is illuminated with an amount of light effective for providing a fluence per ~~[[pulse]]~~ flash of about 0.1 to about 0.6 J/cm<sup>2</sup>.

Claim 38 and 39 (Cancelled)

Claim 40 (Currently amended) A method for inactivating microbes in a platelet composition, the method comprising:

illuminating the platelet composition with pulses of a light having at least one wavelength within a range of 170 to 2600 nm and a fluence per ~~[[pulse]]~~ flash greater than about 0.001 J/cm<sup>2</sup>, and

repeating the illumination of the platelet composition every 6 hours, the illumination effective for inactivating microbes and for providing a zero net increase of microbial counts in the platelet composition,

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wherein platelet aggregation is not decreased by more than about 40%, and

wherein said method does not include the addition of genotoxic chemical agents ~~a quenching agent, photoradiation sensitizer, or albumin.~~

Claim 41 (Previously presented) The method of inactivating microbes of claim 40 wherein the platelet composition is illuminated with pulses of light having wavelengths within a spectral range of at least between about 240 nm and about 280 nm and having a pulse duration of less than 100 ms.

Claim 42 (Previously presented) The method of inactivating microbes of claim 40 wherein the platelet composition is illuminated with an amount of light effective for providing a fluence per ~~[[pulse]]~~ flash of about 0.1 to about 0.6 J/cm<sup>2</sup>.